APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/759,695	01/12/2001	Robert H. Halstead JR.	2682.2013-003	2643

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EXAMINER
TANG, KUO LIANG J

ART UNIT	PAPER NUMBER
2122	

DATE MAILED: 11/20/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

-- *The MAILING DATE of this communication appears on the cover sh et with th correspond nc address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>Nov. 10, 2003</u>.

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1-22</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>1-22</u> is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

       1.☐ Certified copies of the priority documents have been received.

       2.☐ Certified copies of the priority documents have been received in Application No. _____ .

       3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

    a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>2-3, 5-6</u>.

4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other:

Specification

1.   The abstract of the disclosure is objected to because the abstract of the disclosure exceeds 150 words in

length. Correction is required. See MPEP § 608.01(b).

2.   The disclosure is objected to because of the following informalities:

Page 1, Lines 14-15, "[incr Tk]' is not referenced properly.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3.   Claims 1, 3, 4, 9-10, 12-13, 18-20 and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by

Berry et al. (US Patent No. 5,732,271) hrerafter Berry.

4.   *As Per Claim 1*, Berry disclosed A method of processing data comprising:

        -defining an object with an option data structure which supports references to option values without

preallocation of memory space for the full option values; (see Column 2, Lines 37-41, "The foregoing objects

are achieved by a method and system which provides a prototypical object which can be copied to create a

derived object. **A derived object can contain attribute values or it can hold references to prototypical**

objects.") and (see Column 3, Lines 51-54, "For example, button object 220 can contain attributes such as

background color, button action and size. Rectangle object 214, on the other hand, can contain attributes such as

fill color, contents, border type and size."). The Examiner interprets only attribute values contained in the

derived object need memory space preallocated; for those reference it holds do not require memory

preallocation (already allocated by the prototypical objects). *and*

-notifying objects of a change in an option value through a change handler identified by an option binding, the option binding being located by first searching a mapping data structure for a previously computed mapping to the option binding and, if no mapping was previously computed, by then computing the mapping to the option binding and storing the mapping in the mapping data structure. (see Column 2, Lines 41-50, "If a required value is not held by a prototypical object, the present invention discloses a scheme by which the object **searches up an object hierarchy to find the required attribute.** In addition, each object can register interests in prototypical objects. If an attribute of a prototypical object changes, the prototypical object **informs** all registered objects of the change. At runtime, the prototypical object becomes a master object whose attribute values can be changed by the user. Changes in master object attributes are **propagated** to all registered derived objects.").

5.   *As Per Claim 3*, the rejection of claims 1 is incorporated respectively and further Berry disclosed

        -the option binding is a most specific option binding given a class and a base option binding. (see Column 3, Lines 51-54, "For example, button object 220 can contain attributes such as background color, button action and size. Rectangle object 214, on the other hand, can contain attributes such as fill color, contents, border type and size.")

6.   *As Per Claim 4*, the rejection of claims 1 is incorporated and further Berry disclosed

        -change handler code for one option is defined in different classes within a class inheritance hierarchy and the change handler code from each class is executed when the option value changes. (see Column 2, Lines 41-50, "If a required value is not held by a prototypical object, the present invention discloses a scheme by which the object searches up an object **hierarchy** to find the required attribute. In addition, each object can register interests in prototypical objects. If an attribute of a prototypical object changes, the prototypical object **informs** all registered objects of the change. **At runtime**, the prototypical object becomes a

master object whose attribute values can be changed by the user. Changes in master object attributes are

propagated to all registered derived objects.") and (see Column 4, Lines 22-31, "FIG. 3 depicts top card 310

of the attribute sheet for button object 220. Button 220 has one attribute: background color. This attribute is

indicated by tab 312 associated with the top card 310. To change the background color for button object 220 the

developer selects tab 312 on attribute sheet 310, then the developers selects a color from the displayed palette of

rectangle objects 316. After a color is selected, the developer can edit the color by pressing button 318, select

the color by closing the attribute sheet using window button 324 or cancel the selection by pressing button

320.").

7.   *As Per Claim 9*, the rejection of claims 1 is incorporated respectively and further Berry disclosed

        - the class which supports the option data structure includes defined fields to support values in

preallocated memory space. (see Column 2, Lines 37-41, "The foregoing objects are achieved by a method and

system which provides a prototypical object which can be copied to create a derived object. **A derived object**

can contain attribute values or it can hold references to prototypical objects.") and (see Column 3, Lines 51-

54, "For example, button object 220 can contain attributes such as background color, button action and size.

Rectangle object 214, on the other hand, can contain attributes such as fill color, contents, border type and

size.").

8.   *Claim 10* is the system claim corresponding to the method claim 1 and is rejected under the same reason

set forth in connection of the rejection of claim 1.

9.   *As Per Claim 12*, the rejection of claims 10 is incorporated and is rejected under the same reason set

forth in connection of the rejection of claim 3.

10.   *As Per Claim 13*, the rejection of claims 10 is incorporated and is rejected under the same reason set

forth in connection of the rejection of claim 4.

11.   *As Per Claim 18*, the rejection of claims 10 is incorporated and is rejected under the same reason set

forth in connection of the rejection of claim 9.

12.   *Claim 19* is the system claim corresponding to the method claim 1 and is rejected under the same reason

set forth in connection of the rejection of claim 1.

13.   *Claim 20* is the computer-readable medium claim corresponding to the method claim 1 and is rejected

under the same reason set forth in connection of the rejection of claim 1, further Berry disclosed

computer-readable medium. (see Column 3, Lines 22-32, "The workstation shown in FIG. 1 includes random

access memory ("RAM") 14, read only memory ("ROM") 16, and input/output ("I/O") adapter 18 for

connecting peripheral devices such as **disk units 20** and tape drives 40 to bus 12, user interface adapter 222 for

connecting keyboard 24, mouse 26, speaker 28, microphone 32, and/or other user interface devices such as a

touch screen device (not shown) to bus 12, communication adapter 34 for connecting the workstation to a data

processing network, and display adapter 36 for connecting bus 12 to display device 38.").

14.   *Claim 22* is the computer data signal claim corresponding to the method claim 1 and is rejected under

the same reason set forth in connection of the rejection of claim 1.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set

forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

15.   Claims 2 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berry et al. (US Patent No. 5,732,271) hrerafter Berry, in view of Li et al. (US Patent No. 5,943,496) hereafter Li.

16.   *As Per Claim 2*, the rejection of claims 1 is incorporated and further Berry did not explicitly disclose the mapping data structure is a hash table. However, Li teaches *the mapping data structure is a hash table.*(see Column 9, Lines 20-25, "The VMX first registers the component object class name and the component object instance specification in a **hash table** referred to herein as the object/name table (step 720). The object/name table is for enabling the VMX to identify the component object instance associated with a particular instance name."). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Li into the system of Berry, to have the mapping data structure be a hash table. The modification would have been obvious because one of ordinary skill in the art would have been motivated to use the object/name hash table for enabling the VMX to identify the component object instance associated with a particular instance name by using hash table.

17.   *As Per Claim 11*, the rejection of claims 1 is incorporated and is rejected under the same reason set forth in connection of the rejection of claim 2.

18.   Claims 5-8, 14-17 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berry et al. (US Patent No. 5,732,271) hrerafter Berry, in view of Hostetter et al., "Curl: A Gentle Slope Language for the Web," World Wide Web Journal, **Spring, 1997**, hereafter Hostetter.

19.   *As Per Claim 5*, the rejection of claims 1 is incorporated and further Berry did not explicitly disclose

getting option value. However, Hostetter teaches *an option data structure includes a default value, the*

method further comprising, in a get operation to an instance of the class, if an option value which applies to

the instance has been set, getting the set option value and, if a value which applies has not been set, getting

the default value for the class. (see Section3, Page 4, Lines 1-2, "The screen shot above reflects the fact the

user has selected something **besides** the **default** color (red) and quantity (0)."). Therefore, it would have been

obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of

Hostetter into the system of Berry, to get option value. The modification would have been obvious because one

of ordinary skill in the art would have been motivated to incorporate a dynamic object with a simple mechanism

for propagating changes in its value to other dynamic objects that depend on first object's value and to

customize the object using option value.

20.   *As Per Claim 6*, the rejection of claims 1 is incorporated and further Berry did not explicitly disclose

option list. However, Hostetter teaches *the option data structure comprises a linked list of option items*

having option values. (see Section 4.3, Page 10, Lines 21-22, "Much of the flexibility of boxes comes from the

use of properties to control the rendering of primitive objects. A property is a (name,value) binding and each

Graphic object has an associated **list** of properties."). Therefore, it would have been obvious to one of ordinary

skill in the art at the time the invention was made to incorporate the teaching of Hostetter into the system of

Berry, to comprise option list. The modification would have been obvious because one of ordinary skill in the

art would have been motivated to implement properties in a dynamically bound environment using a deep

binding mechanism and to facilitate the selection of options using option list.

21.   *As Per Claim 7*, the rejection of claims 1 is incorporated and further Berry did not explicitly disclose a

nonlocal option value applies to other objects in a nonlocal option hierarchy. However, Hostetter teaches *a*

nonlocal option value applies to other objects in a nonlocal option hierarchy. ((see Section3, Page 4, Lines 1-2, "The screen shot above reflects the fact the user has selected something besides the default **color** (red) and quantity (0)."). **Color** is a nonlocal option because all text in a given document is usually the same color. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Hostetter into the system of Berry, to comprise a nonlocal option value applies to other objects in a nonlocal option hierarchy. The modification would have been obvious because one of ordinary skill in the art would have been motivated to implement properties in a dynamically bound environment using a deep binding mechanism.

22.   *As Per Claim 8*, the rejection of claims 7 is incorporated and further Berry did not explicitly disclose the nonlocal option hierarchy is a graphical hierarchy. However, Hostetter teaches *the nonlocal option hierarchy is a graphical hierarchy.* (see Section3, Page 4, Lines 1-2, "The screen shot above reflects the fact the user has selected something besides the default **color** (red) and quantity (0).") and (see Section4.3, Page 9, Lines 34-35, "text. Properties control the **color**, size and font family as well as indicating whether the text should be bold or italic."). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Hostetter into the system of Berry, to comprise the nonlocal option hierarchy is a graphical hierarchy. The modification would have been obvious because one of ordinary skill in the art would have been motivated represent to a graphic image as a hierarchical tree of Graphic objects (Leaves of the tree are primitive Graphic objects which know how to draw themselves, usually after looking up the values of various properties).

23.   *As Per Claim 14*, the rejection of claims 10 is incorporated and is rejected under the same reason set forth in connection of the rejection of claim 5.

24.   *As Per Claim 15*, the rejection of claims 10 is incorporated and is rejected under the same reason set forth in connection of the rejection of claim 6.

25.   *As Per Claim 16*, the rejection of claims 10 is incorporated and is rejected under the same reason set forth in connection of the rejection of claim 7.

26.   *As Per Claim 17*, the rejection of claims 16 is incorporated and is rejected under the same reason set forth in connection of the rejection of claim 8.

27.   *As Per Claim 21*, the rejection of claims 20 is incorporated and is rejected under the same reason set forth in connection of the rejection of claim 6.

Conclusion

28.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

29.   **Title**: "FAQ's, GUI Toolkit", Curl Corporation Web Site (http://www.curl.com/developers/faq_gui.php?), 1998-2003.

30.   **Title**: Method and apparatus of translating and executing native code in a virtual machine environment. **US PUB NO:** 2001/0005886 A1.

31.   **Title**: System, method and medium for managing information. **USPN**: 6,119,157.

32.   **Title**: Method and apparatus for dynamic selection of instructions for compiling using tags. **USPN**: 6,305,012.

33.   Any inquiry concerning this communication or earlier communications from the examiner should be

directed to Kuo-Liang J Tang whose telephone number is 703-305-4866. The examiner can normally be

reached on M-F 8:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Q

Dam can be reached on 703-305-4552.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9306.

KLT / *KLT*

November 10, 2003

WEI ZHEN

primary patent Examiner